Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.

search [illegible] the [illegible] [illegible] [illegible] [illegible] plants [illegible] [illegible] will [illegible] [illegible] the [illegible] [illegible] have [illegible] [illegible].

[illegible] in 19[illegible], a gypsy moth [illegible] was discovered in [illegible] County, [illegible]. [illegible] limits of this infestation [illegible] the Federal [illegible] New York State Conservation Department. This [illegible] this campaign. North [illegible] is situated in [illegible] County and approximately three-quarters of the [illegible]. This includes all the [illegible] of the center of the [illegible] and [illegible] territory further removed. As a result of this work, approximately [illegible] egg clusters were found and destroyed, and [illegible] were conducted during the summer. [illegible] all of the [illegible] within three miles of the center of the [illegible] and a large part of the area in [illegible] County that was not covered last year, have been examined. This [illegible] and [illegible] clusters were found and all of these were within three miles of North [illegible].

The gypsy moth work conducted in New Jersey is done cooperatively by Federal and State forces. During the past 12 months [illegible] intensive [illegible] work in this State in the following townships: [illegible] boro, [illegible], and [illegible]. The work in Hillsboro [illegible] on the work done in [illegible] and the work done outside of [illegible]. All of the work in [illegible] was [illegible] the [illegible] no gypsy moth infestation was found. [illegible] property where the original gypsy moth infestation [illegible] of over 5,000,000 egg clusters was located in 1920.

Scouting work in New Jersey [illegible] could be [illegible].

No gypsy moth infestations have been discovered in New Jersey since the summer of 1927.

There were a total of 19 violations reported during the month, as follows: [illegible] of Connecticut [illegible], 2 of Massachusetts [illegible], and 3 of New Hampshire [illegible]. All of the [illegible] violations were [illegible] and were [illegible] of the [illegible] on the part of [illegible] or transportation agents. [illegible] investigations [illegible] that the [illegible] were [illegible]. Information [illegible] was given by [illegible] concerned.

9
2N1

LIBRARY
RECEIVED
★ MAY 11 1931 ★
U. S. Department of Agriculture

NEWS LETTER

PLANT QUARANTINE AND CONTROL ADMINISTRATION

UNITED STATES DEPARTMENT OF AGRICULTURE

Number 5 (NOT FOR PUBLICATION) May, 1931.

ADMINISTRATIVE

Mr. B. Connor has been designated Chairman of the Board of Review of Efficiency Ratings of the Plant Quarantine and Control Administration vice Mr. S. A. Rohwer. Dr. Lon A. Hawkins has been designated as a member of the Board vice Mr. Connor.

TECHNOLOGICAL

A portable device for fumigating box cars has been developed for use at ports of entry where no car fumigation house is available. With this hand applicator it is possible to use liquid hydrocyanic acid where only relatively small quantities of gas are needed. The applicator, charged with 10 pounds of liquid hydrocyanic acid, complete and ready for operation, weighs only about 35 pounds, and is compact and convenient to use. In fumigating box cars, one door is left slightly ajar and a spray rod equipped with ordinary spray nozzle is thrust through this opening. This is connected with a portable applicator, and liquid hydrocyanic acid is forced through this nozzle by means of compressed air furnished by a hand pump. This method of fumigating is simple and safer than the old pot method and has some advantage over the use of discoids or hydrocyanic acid combined with other absorbent material. The device can be used for the fumigation of material in small buildings, rooms, or fumigation boxes, if desired.

A study of the compression of cotton in the ordinary commercial compress has recently been made with Messrs. A. C. Johnson and W. T. Hunt of the El Paso laboratory. They have found that a bale of cotton under a

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

……

[illegible]

[illegible]

[illegible]

pressure of about 450 tons was reduced to a density of around 50 pounds per cubic foot, and that in most cases this compression effectively crushed the seeds that were within the bale. The tests were made under both standard compression and high density, and it is interesting to note that the density of the cotton was about the same in the two cases. It requires a pressure of around 60 pounds on a single cottonseed to reduce the original diameter 40 per cent.

Mr. J. M. Luckie is at Laredo working in cooperation with Foreign Plant Quarantines Division in repairing and reconditioning the car fumigation house at that port.

FOREIGN PLANT QUARANTINES

SOME RECENT ENTOMOLOGICAL INTERCEPTIONS OF INTEREST

West Indian fruit fly from St. Vincent.--Larvae of the West Indian fruit fly (Anastrepha fraterculus) were intercepted at Boston in mango in stores from St. Vincent. This is the first interception of this fruit fly from St. Vincent by inspectors of the Plant Quarantine and Control Administration. (See also News Letter No. 1, January, 1931.)

Vegetable ivory beetle or button beetle.--The vegetable ivory beetle or button beetle (Coccotrypes dactyliperda) was intercepted at Washington, D. C., in the seed of Phoenix reclinata in the mail from France. This scolytid is recorded as damaging the kernels of several different palms, the buttons made from vegetable ivory, which is the hard seed of the palm, Hyphaene crinata, and nutmegs. It is a native of Africa and was recently found in California infesting the seeds of an ornamental palm, Phoenix canariensis.

Bean pod borer in string beans.--Larvae of the bean pod borer (Maruca testulalis) were intercepted at Philadelphia in string beans in stores from Porto Rico. While this insect has been intercepted several times in string beans from Cuba, this is the first definite record of its being taken by inspectors of the Plant Quarantine and Control Administration in string beans from Porto Rico. In the Journal of the Department of Agriculture of Porto Rico, Oct.,1918, p. 279, Dr. R. T. Cotton discusses this pyralid as follows: "The pinkish-white larva of this moth is frequently served on the table with string beans. It has the habit of boring into the green pods, and while not generally abundant is occasionally troublesome."

Sweetpotato stem borer from China.--The sweetpotato stem borer (Omphisa anastomosalis) was intercepted at Seattle in sweetpotato in stores from China. This insect is recorded from China, India, Ceylon, New Guinea, Siam, and the Philippines, and was introduced into Hawaii about 1900 where it has become quite a pest. This pyralid attacks sweetpotato and other garden crops. It bores in the stem and sometimes in the tuber.

A relative of the greenhouse thrips.--Heliothrips bicinctus was intercepted at Washington, D. C., on Haemanthus puniceus in the mail from Holland. This represents the first interception of this thrips by inspectors of the Plant Quarantine and Control Administration. Prof. J. R. Watson of Florida reports on this insect as follows: "This is a European thrips, closely related to our greenhouse thrips, and apparently with about the same habits; i.e., in Europe it is a greenhouse pest. This insect has been reported from Western Europe, England, Holland, France, Western Spain, and Northern Africa. It is not known to occur in this country, and from reports of its habits we do not need it."

New thrips record from Cuba.--The thrips Elaphrothrips tuberculatus was intercepted at Washington, D. C., in cavities in dried fruit of Cordia alba in the mail from Cuba. Prof. J. R. Watson of Florida reports that although this thrips is distributed over the United States, this is the first report from Cuba.

Nut fruit tortrix in chestnuts from Japan.--Larvae of Laspeyresia splendana (Olethreutidae) were intercepted at Honolulu, Hawaii, in fresh chestnuts from Japan. This insect is known as the nut fruit tortrix and is reported as being quite destructive to the nuts of chestnut, walnut, and oak in Europe.

Tomato miner of Mexico.--A larva of Phthorimaea lycopersicella (Gelechiidae) was intercepted at Douglas, Ariz., on a tomato in baggage from Fronteras, Sonora, Mexico. This insect is the tomato miner of Mexico, California, Hawaii, and the West Indies. It is a leaf feeder on tomato and closely related to the potato tuber worm (Phthorimaea operculella). It has been intercepted several times with shipments of tomatoes from Mexico as well as with tomatoes in cargo from the Bahamas and Bermuda.

New to the National Museum collection.--A chrysomelid beetle, Coptocycla sordida, was intercepted at Charleston, S. C., on a banana stem in cargo from Honduras. This beetle, which is not reported from continental United States, is new to the National Museum collection.

Oriental fruit moth from Japan.--Flowering cherry from Japan was found by collaborators of the Plant Quarantine and Control Administration in California to be infested with the Oriental fruit moth, Laspeyresia molesta.

Scale insect from Japan.--The coccid Phenacaspis aucuba (Cooley) has been intercepted several times at Seattle on Aucuba sp. in furnishings from Japan. Dr. H. Morrison, of the Bureau of Entomology, states that the determination is based on description only, as there is no authentic specimen available for comparison. This scale insect is recorded in Mrs. Fernald's "Coccidae of the World," 1903, p. 237, as being taken at quarantine in California on Aucuba from Japan.

Scale insect on orchid.--The coccid Lepidosaphes tuberculata was intercepted at Washington, D. C., on orchid (Cymbidium sp.) in cargo from

England. This scale insect has been intercepted on *Ophiopogon japonicus* (Japanese snakebread) from China, *Cymbidium* sp., from Belgium, and several species of *Cymbidium* from England.

Scale insect in the mail from Cuba.--The coccid *Hemichionaspis minor strachani* was intercepted at Washington, D. C., on the stems of *Zanthoxylum juglandifolium* in the mail from Cuba. This scale insect is recorded from West Africa in Mrs. Fernald's "Coccidae of the World."

Relative of sweetpotato weevil from the Philippines.--*Cylas turcipennis* (Curculionidae) was intercepted at Philadelphia in sweetpotato in stores from the Philippines. This weevil, which is closely related to the sweetpotato weevil (*Cylas formicarius*), has been previously intercepted by inspectors of the Plant Quarantine and Control Administration in sweetpotatoes in stores from Japan and the Straits Settlements.

SOME RECENT PATHOLOGICAL INTERCEPTIONS OF INTEREST

Sphaeronema on Phlox.--*Sphaeronema* sp. was found on *Phlox* Chef d'Or from France (in mail) at Washington, D. C. The Plant Disease Survey has no previous record of the occurrence of a *Sphaeronema* on *Phlox*. The genus is familiar because of the common black rot of sweetpotato fungus, *S. fimbriatum* (now known as *Ceratostomella fimbriata*). (See also the following item.)

Ceratostomella adiposum on Eleocharis.--The black rot fungus found on *Eleocharis tuberosum* from China (in cargo), at New York City, was determined as *Ceratostomella adiposum* by a specialist of the Bureau of Plant Industry after cultural study of the fungus. The fungus was first described by Butler as *Sphaeronema adiposum*. It is common in the cane fields of India, and does considerable damage to seed pieces under certain conditions. Ordinarily, however, it is considered a weak parasite of little economic importance. It was found in Louisiana during the winter of 1924, growing with slight damage on seed cane stored in sawdust. In the spring of 1926 it caused great loss in a field of cane growing near Houma, La. The fungus was given its present name in 1927, when it was found that the interesting fruiting bodies with the long slender beaks were perithecia rather than pycnidia, as at first thought. What is apparently the same fungus has been intercepted from time to time on this host and an effort will be made to check all available specimens to determine if it is the same.

Anthracnose.--Anthracnose, fruit "ripe rots," and kindred diseases have been plentiful among the more recent pathological interceptions. The space available does not permit of discussion of these diseases but a brief summary of many of them will indicate something of the range of this group of diseases.

Glomerella cingulata on apples from Germany (mail, Detroit and Philadelphia), from England (ship's stores, Gulfport); on orange leaves from China (baggage, Seattle); on mango from Mexico (baggage, El Paso); on pepper from Cuba (cargo, New York). *G. gossypina* on cotton leaves and twigs from Jamaica

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

(quarters, Philadelphia).

Colletotrichum gloeosporioides on avocado from Mexico (baggage, El Paso); *C. coffeanum* on coffee berry from Trinidad (baggage, Boston) and on coffee berries and twigs from Cuba (baggage, Philadelphia); *C. pisi* on peas from Japan (ship's stores, Seattle); *C. pollaccii* on Aucuba leaves from Japan (furnishings, Seattle); *C. omnivorum* on Aspidistra leaves from Japan (furnishings, Seattle); *C. agaves* on *Agave* sp. leaves from Cuba (baggage, Philadelphia); *C. falcatum* on sugarcane from Cuba (baggage, Philadelphia); *C. blighiae* on *Blighia sapida* from Cuba (baggage, Philadelphia); *C. nigrum* on pepper from Italy (mail, Philadelphia); *C. lindemuthianum* on string beans from Mexico (cargo, Brownsville), from Panama (ships' stores, Philadelphia), from Cuba (cargo, New York, and ship's stores, New Orleans); *C.* sp. on *Poaceae* sp. from Cuba (cargo, New York).

Gloeosporium euonymicolum on *Euonymus* sp. from Japan (furnishings, Seattle); *G. musarum* on banana from Mexico (cargo, Brownsville), from Cuba (ship's stores, Philadelphia), on plantain fruit stalk from Cuba (cargo, New York); *G. melongenae* on eggplant from Cuba (cargo, New Orleans); *G. cingulata* on okra from Cuba (ship's stores , Philadelphia); *G.* sp. on orchid plants from Brazil (furnishings, New Orleans); on cactus plant from Germany (quarters, Philadelphia); on *Sansevieria cylindrica* from England (mail, Washington, D. C.); on orange leaves from Spain (ship's stores, Philadelphia); on orange from Egypt (ship's stores, Philadelphia). (See next item.)

Tomato Anthracnose.--Many interceptions of tomato anthracnose (*Colletotrichum phomoides*) on both ripe and green fruits arriving in cargo, ships' stores, and baggage have been received from New York, Detroit, Philadelphia, Baltimore, Norfolk, New Orleans, Brownsville, El Paso, Douglas, Naco, and Nogales. The countries of origin were Cuba, Bahamas, Porto Rico, and Mexico. This disease is said to be as widespread as is the culture of tomatoes but is of minor economic importance.

Infected packing material.--II, III *Puccinia anomala*, a trace of *P. graminis* and *Erysiphe graminis* were found on barley straw, and *Helminthosporium oryzae* on rice straw, used as packing material for breakable merchandise from Japan, in cargo, at Philadelphia. Packing material including cases, crates, etc., as well as straw, etc., can harbor destructive plant pests. *P. anomala* is a rust of barley with a general distribution in the United States. *H. oryzae* is the "sesame" spot disease or seedling blight and is one of the most serious diseases reported on rice. It has been reported from Florida and Louisiana (U. S. D. A. Bul. 1366).

Rusted wheat grains.--II, III *Puccinia graminis* was found on kernels of wheat from Peru (in mail) at Washington, D. C. Heald (Manual of Plant Diseases, p. 732) says "at present the opinion prevails that stem rust is not transmitted from one wheat crop to the next by means of either contaminated or infected seed, bearing spores or dormant mycelium."

Black-root of radish from Japan.--*Pythium* (*Nematosporangium*) *aphanidermatum* is reported from widely scattered States east of the Mississippi River. It was intercepted recently at Philadelphia in ship's stores from Japan.

Other Diseases.--Oidium euonymi-japonici was found on Euonymus sp. leaves from Japan (in furnishings) at Seattle. The disease is a powdery mildew reported on this host from Japan, Argentina, Europe and Louisiana.

Phomopsis cocoes was reported from Ceylon in 1922 as causing a decay of the fruits of Cocos nucifera. This disease was recently intercepted at Philadelphia on a coconut from Cuba (in baggage).

Coniothyrium diplodiella was found on grape cuttings from Italy (in mail) at Philadelphia. Stevens (Plant Disease Fungi, p. 349) says this is the cause of a white rot of grapes.

Further data on root-knot.--Caconema radicicola was found in Caryopteris mongolensis (imported under special permit) from Orleans, France, at Washington, D. C.; in a shipment of field-grown rose stocks from Germany (in cargo), at New York City; and in Irish potatoes (in ships' stores) from Dutch Guiana, at New Orleans, La., from Chile at Wilmington, N. C., and from Australia, at Philadelphia. Caryopteris is a previously unknown host genus for this cosmopolitan parasite, according to an advice received from the Bureau of Plant Industry. The same authority states that records of root-knot on field-grown plants from Germany are rare. The infestations in Irish potato from Dutch Guiana and Chile are of interest and, we believe, may add to the known distribution of this disease of potatoes. No information was available to show records of this potato disease in Australia.

More about nematodes.--Space does not permit of an adequate statement of the scientific information accumulated as a result of the recent nematode interceptions. A few interesting facts follow: Tylenchus dipsaci was found in potatoes (in ships' stores) from France and Italy, at Philadelphia, thereby adding two new countries to the list of localities from which this potato disease has been intercepted by inspectors of the Plant Quarantine and Control Administration. The list now includes England, Germany, Holland, Belgium, Prince Edward Island, New Brunswick, France, and Italy.

Pathoaphelenchus sp. (?) (a subgenus raised to generic rank) was found in a potato from England (in ship's stores), at Philadelphia. This is the first record in the interception files of the Administration for this genus on any host. An interesting item in connection with the elevation of this genus will appear in this space as soon as we are at liberty to publish it.

Neotylenchus abulbosus (an unpublished genus and species) was found recently in ships' stores at Philadelphia in potatoes from Holland, and thrice in potatoes and once in carrots from England. This nema is of particular interest in that it is a true plant parasite and one that is likely to be mistaken for Tylenchus dipsaci, which it closely resembles. When we are at liberty to do so we shall publish another interesting item concerning it.

Tylenchorynchus (styriacus?) was found in parsnip from Cape Town (in ship's stores) at Philadelphia. The disease symptoms were very marked and the specialist making the determination advised that they could have been caused by this nema which is a member of a plant parasitic genus.

Items omitted or held over.--In selecting interceptions for mention in this News Letter it is the general practice to choose from the determinations received since the preparation of the copy for the previous issue. Since this copy is prepared nearly thirty days in advance of issue, some items may be held over or omitted that would otherwise be included had the determinations been received in time.

Heightening of interest in interceptions noted.--The increase in the number of collections received for determination is probably due in part to added stress that has been placed on the field inspection of special permit material, and in part to the new ports that have been opened in the past few months and to additions to personnel in some of the other ports. It is believed, however, that a heightening of interest in the "finding" phase of inspection work is largely responsible for this increase.

Quality of pathological interceptions improving.--Pathological interceptions have increased in number and improved in quality. The improvement is to be noted both in the average importance of the interceptions and the quantity of the material submitted in the individual collections. While a few scales on a small piece of host material, or a few larvae in a vial, are usually adequate for an entomological determination, a small fragment of diseased host is frequently worthless to the pathologist who is trying to make the pathological determination. Most of the inspectors are now sending in a satisfactory amount of material in their pathological collections; which practice, incidentally, is increasing the amount of work required of the force in the Washington office. For example, figures computed for the month of February show that 3,830 pieces of host material (tubers, roots, cuttings, leaves, etc.) were received, each of which was given the customary careful scrutiny for both insects and diseases.

Nemas coming into prominence.--Many of the interceptions of plant material with various types of infestation and infection are receiving determinations of distinct value to scientific work in general and to the Administration in particular. For example, the finding of nematodes in a wide range of hosts from many foreign localities has added considerably to the existing store of scientific knowledge of these minute animals, and is directing the attention of the Administration more definitely to the importance of the plant pests within the order Nematoda.

MEXICO EXCLUDES CORN AND PLANTS OR PARTS THEREOF WHICH MIGHT INTRODUCE THE EUROPEAN CORN BORER

According to a cablegram from the Commercial Attaché of the Department of Commerce at Mexico City, the Mexican Decree of March 28, 1931, absolutely prohibits the importation into Mexico of corn and all other plants and parts of plants which might carry the European corn borer. The following plants are named: Corn (Zea mays) and all parts of the plant, broomcorn, sorghum, Sudan grass, celery and rhubarb, dried or fresh, beets with tops, cut flowers or the entire plants of chrysanthemum, aster, cosmos, zinnia, mallow, hydrangea, gladiolus, and dahlia (except dahlia tubers without stem), and straw from all kinds of cereals and grasses, whether imported as such or

used as packing.

This quarantine may be modified as soon as adequate fumigation and sterilization measures are available.

IMPORTATION OF WHEAT INTO MEXICO ABSOLUTELY PROHIBITED

The Mexican Presidential Decree of March 5, 1931, amends Exterior Quarantine No. 8, by prohibiting absolutely the importation of all species and varieties of wheat (Triticum) into Mexico, as a precaution against the introduction into that country of the flag smut disease, Urocystis tritici, and the take-all disease, Ophiobolus graminis. Wheat may be imported into Mexico only under special permit when intended for scientific study or work.

VIRGIN ISLANDS, UNITED STATES OF AMERICA, REMOVE BAN AGAINST IMPORTATION OF FLORIDA FRUITS AND VEGETABLES

Executive Order No. 4 of February 11, 1931, cancels that of August 17, 1929, temporarily prohibiting the importation into the Virgin Islands, United States of America, of all Florida-grown host fruits and host vegetables of the Mediterranean fruit fly.

APPEARANCES MAY BE DECEPTIVE

On September 25, 1930, some pupae were found among dried onions in a bin on the yacht Vileehi in the port of San Diego, and at the same time larvae were found in the onions themselves, which were beginning to decay. The inspector assumed that both larvae and pupae were identical and belonged to the group of scavenger insects. The onions were boiled as a precaution and a few of the pupae were submitted, but no larvae. When these pupae were later identified as those of the melon fly (Bactrocera cucurbitae), the question arose: Were the infested onions a new host for melon fly? Mr. A. C. Fleury, Senior Quarantine Inspector for California, comments on this peculiar situation in a letter to this office on March 17.

His conclusion was that the bin had originally contained other plant material infested with the melon fly; that this material had been used up or discarded before reaching port; that the pupae which had been found among but not in the onions originated in these proper hosts which were absent at the time of inspection; and that the larvae reported were true scavenger fly stages properly belonging in the onions where they were found. This interesting situation emphasizes rather well the readiness with which one may fall into error. Here as elsewhere "Eternal vigilance is the price of safety." It also illustrates the wisdom of "getting the facts."

JAPANESE WHEAT STRAW BEARS RUSTS

Two lots of Japanese wheat straw were recently refused entry in Honolulu under the authority of Quarantine No. 59. A small sample submitted to

Washington revealed the presence of two injurious wheat diseases, Puccinia graminis and triticina. The straw was brought to Honolulu to be used in cooking fish. It is understood that fish is wrapped in the straw and then steamed, the straw imparting a rich flavor to the fish.

USEFUL COOPERATION

On February 6, 1931, a memorandum was sent to the Mexican border ports asking them to be on the lookout for bacterial canker in incoming tomatoes, a disease hitherto suspected by Miss M. K. Bryan of the Bureau of Plant Industry as occurring in Mexico but not yet definitely established as existing there. On February 28, diseased tomatoes from Los Mochis, Sinaloa, were intercepted at Nogales and were referred to Miss Bryan, who determined the disease as bacterial canker. This case illustrates once more the valuable assistance that port inspection may give in the course of its regular duties in adding to our store of knowledge on pests and their distribution.

NUMBER OF INTERCEPTIONS INCREASING

The volume of material submitted for identification is steadily increasing, both in the number of collections made and in the amount of material in each collection. In recent months this increase has been markedly rapid. The following figures, which do not include collections made at the inspection house in Washington, D. C., or collections made by the collaborators except when specimens were submitted to this office for identification, show the number of port interceptions, local collections, special permit field collections, etc., for the past five years:

1926 - 6778 Collections	1929 - 5265 Collections
1927 - 6902 "	1930 - 8786 "
1928 - 5803 "	

About 65 per cent of the 1930 collections were received in the last half of the year, and the total for 1930 is about 67 per cent in excess of that for 1929.

In the first three months of 1931, 3,215 collections were received, as follows: January, 984; February, 987; March, 1,243. The total is almost double that for the corresponding period of 1930 and is more than the total for the first half of last year. The collections for March are nearly two and a half times as many as for March, 1930. It is interesting to note in this connection that several of the smaller ports did not submit a single collection during the three-month period.

NOTES FROM PORTO RICO

Mr. Richard Faxon, in a recent report from Porto Rico, notes the falling off in citrus shipments this season from the island on account of low prices, and the increasing attention being paid to the growing of export vegetables.

These crop volume changes, he notes, have altered the routine of inspection under Quarantine No. 58, and the increased amount of attention now needed for inspection of vegetables in the field has resulted in 133 interceptions since January 1, 1931. Many of these interceptions were new records for Porto Rico and 18 of the plant disease specimens have been deposited in the collection of the Office of Mycology.

Inspectors in Porto Rico are now equipped with tropical uniforms consisting of white linen suits and the regulation cap with a white top in place of the forestry-green serge top.

DOMESTIC PLANT QUARANTINES

TRANSIT INSPECTION

The field office in charge of the European corn borer and Japanese beetle quarantine work has recently transferred to the transit inspection division the responsibility of supervising the transit inspection activities at Philadelphia and Baltimore, which are carried on primarily for enforcing the above quarantines. Two inspectors are engaged in the work at Philadelphia and one at Baltimore.

At Pittsburgh, inspection work has been initiated in freight and express shipments, Mr. K. S. Rohwer, formerly of the Boston force, having been assigned to this post. The Boston force has accordingly been increased to fill the vacancy occasioned by Mr. Rohwer's transfer.

Mr. J. M. Corliss, in charge of the transit inspection work in the Middle West, recently assisted the staff of the European corn borer office in the inauguration at the stockyards of Indianapolis and Cincinnati, the work of checking on the arrival of trucks and stock cars, to see that cornstalks are not used as bedding. This is a continuation of the work started at Indianapolis in January by the transit inspection service, and later temporarily discontinued on the return of the inspector to his regular duties at Kansas City. Twelve violations of the quarantine were discovered in one day's work at Cincinnati on March 19.

A report of the Boston transit inspection office for the period from July 28, 1930, to the close of the calendar year, which has recently been submitted to the Administration by Mr. E. J. McNerney, in charge at that station, shows that Boston is an important location at which to check on the interstate movement of articles restricted under the quarantines affecting the New England States. The work at that point is especially valuable in the interception of shipments of chrysanthemums, which may carry the two-generation strain of the European corn borer, and of Christmas greens, which involve danger of spread of the gipsy moth. Mr. McNerney reports that 351 violations were intercepted at that station during the five-month period, 48 per cent involving infringements of the European corn borer quarantine,

and 26 per cent violations of the gipsy moth and brown-tail moth quarantine. In each of these two groups more than half the intercepted parcels were shipped by private individuals not engaged in the business of handling such products.

An error on the part of an employee of an Indiana nursery in digging, during a snow storm, several dozen white pine trees intended for Austrian pine and filling orders for the latter, was said by the nursery involved to be the cause of a number of violations of the white-pine blister-rust quarantine, which were intercepted by inspectors Scott and Dunlap at Chicago in March. This quarantine prohibits the shipping of five-leafed pines from points east of the western boundary of Minnesota, Iowa, Missouri, Arkansas, and Louisiana , to points west of that line. A check of the company's records with the list of violations reported appears to indicate that every one of those shipments which involved a violation was intercepted and turned back.

A recent memorandum to transit inspectors gave an interpretation of the satin moth quarantine in its application to the shipping of willow twigs when used for tying bundles of nursery stock. The satin moth quarantine restricts only poplar and willow trees and parts thereof capable of propagation. The Administration found that willow twigs employed in this way are not normally used for propagation, and inspectors were accordingly instructed to allow nursery stock so tied to proceed to destination. This action is believed to involve no danger of spread of the satin moth, as the larvae are not known to hibernate on the smooth bark of slender twigs of the type used for this purpose.

WHITE-PINE BLISTER RUST

According to a notice recently received from the State of Massachusetts, the further planting of currant and gooseberry bushes is now forbidden in 210 towns in the State. Ten years ago the towns so restricted numbered 20, and this number has been increased from time to time during the intervening period. The purpose of such action is to set aside these towns as white-pine growing and Ribes-free areas, and thus to assist in preventing the further spread of the blister rust in the State. Massachusetts was one of the first States to take regulatory action on the blister rust, having issued a quarantine prohibiting the entry of five-leafed pines from Europe prior to the enactment of the Federal plant quarantine act.

States which have legally-established blister-rust control areas for the growing of either Ribes or pines, may prevent out-of-State shipments of the restricted plants from entering the areas, under a provision of Federal Quarantine No. 63. This provision requires that before either Ribes or pines may be shipped into such States, a permit must be secured from an official of the State of destination who is designated by the Administration to act in this capacity. States which have set aside such areas up to this time are Maine, Massachusetts, New Hampshire, Connecticut, Rhode Island, New York, Michigan, and Idaho.

NARCISSUS BULB QUARANTINE

Mr. C. R. Stillinger, of the Spokane office, has been in conference and correspondence with the nursery inspectors of Oregon and Washington during recent weeks, aiding in the preparation of their plans for narcissus inspection during the coming spring and summer. On April 3 and 4, Mr. Stillinger attended a conference of the narcissus bulb growers at Tacoma, at which the State nursery inspectors emphasized the importance of especially rigid restrictions to prevent the establishment of eelworm or the increase of bulb flies on the growers' premises. The State of Washington requires the fumigation of all bulbs produced for sale or shipment, in addition to hot-water treatment of bulbs grown on premises where any eelworm infestation whatever is discovered during the inspection season.

Mr. Corliss, for several days beginning on April 15, assisted in training the nursery inspectors of Illinois in the field diagnosis of bulb flies and eelworms.

PHONY PEACH DISEASE QUARANTINE INSPECTION

There was considerable movement of nursery stock and other plant material through Atlanta and Birmingham during the latter part of March, but a sharp drop was noted after April 1, and transit inspection at these two points for enforcement of the phony peach disease quarantine was discontinued the middle of April. A marked change in the nature of the April shipments was noted; shipments of fruit nursery stock from southern points practically ceased, but increases were found in miscellaneous shipments from northern States.

During the month of March 189 shipments of peach and other restricted nursery stock consigned for delivery in 17 different States were certified by Administration inspectors for nurserymen at Concord, Ga.

DATE SCALE

During the month of March 33,675 palm inspections were made in the date growing areas of Arizona and California, and 10 palms were found infested. Two palms, one in a commercial garden and one an ornamental palm, were found infested in the Imperial Valley and defoliated and torched. Eight palms of no commercial value were found infested in the Coachella Valley and were dug out and destroyed. No infested palms were found in Arizona. In the same areas 106,683 palm inspections were made during the quarter ending March 31, and 21 infested palms were found. Only three of these were in

commercial gardens--one in the Imperial Valley and two in the Coachella Valley. Of the remaining 18, two were ornamental date palms and one a Canary Island palm, which were defoliated and torched, and 15 were date palms of no value which were dug out and destroyed.

Two of the infested palms in the Coachella Valley were what are called "leaf base infestations." When a date palm is heavily infested the scale establishes itself not only on the foliage but also on the bases of the leaves, which are protected by several bands of fiber 12 to 18 inches in width which extend around the trunk and are tightened by the expansion due to growth. In treating an infestation of this type the fiber is split and pulled back to expose the scale on the leaf base and the flame of a torch passed over the exposed portion. In some cases the fiber is not cut back far enough and not all the scale is killed. Then if a portion of the leaf base remains alive the scale continue to breed. The time of appearance of the scale on the foliage will depend on the size of the living leaf base and its distance from the foliage. Under certain conditions it is possible that the infestation would not reach the foliage for several years.

Because of this type of infestation, leaf base inspection must be carried on in a number of gardens and these gardens must be kept under observation for some time after the rest of the date growing area is considered free from Parlatoria scale.

EUROPEAN CORN BORER AND JAPANESE BEETLE

During the month of March, transit inspection work was started at Indianapolis, Ind., and Cincinnati, Ohio. Messrs. E. N. Bennett and H. G. Rowden are stationed at Cincinnati, and Messrs. E. F. Deyo and A. E. Brymer at Indianapolis.

The work of combining the administrative activities of the European corn borer and Japanese beetle projects has progressed to such an extent that it will be possible to close the Camden, N. J., office, which is the field headquarters for the Japanese beetle project, and remove the work and employees to South Norwalk, Conn., before July 1, 1931.

It was at first thought that it would be impossible to perfect the organization at South Norwalk in time to close the Camden headquarters before July 1, 1932, but sufficient available office and garage space has now been found at South Norwalk to house both projects. With offices at Philadelphia and Norristown, Pa., and at Whitehorse, N. J., to take care of field activities, all administration work can be handled at South Norwalk. This consolidation will result in a large saving in rental and clerical help. More important, however, than the saving in funds, will be the greater

efficiency and convenience which will result from having all administration work conducted at one point.

The New York office of the European corn borer project has been moved from 45 Broadway to 641 Washington Street, New York City, and combined with the Japanese beetle office already at that location. The consolidated office is under the supervision of Mr. Leland Wolfe.

Clean-up operations conducted jointly by the Plant Quarantine and Control Administration and the State of Connecticut in the town of Danbury, Conn., will be taken care of the early part of April.

The European corn borer infestation in Upper Montclair Township in Essex County, N. J., has been cleaned up jointly by the owners of the property, necessitating no clean-up by the Federal or State Departments. A careful inspection has been made of the entire area, and a very thorough clean-up of cornstalks, corn stubble, weeds, and debris has been carried on by the farm owners. All adjacent premises are likewise clean, the nearest corn stubble being about three miles from the actual point of infestation.

Road patrol inspectors are to start April 1 on the main highways leading out of the generally infested Japanese beetle area in New York, to enforce Quarantine No. 48. A number of inspectors will also be placed on the important roads leading out of the generally infested area in Connecticut on or about April 13.

A lease has been signed for office and storage space at 171 Meadow Road, Rutherford, N. J., to serve as a combined European corn borer--Japanese beetle office. The location is central for carrying on both projects in this area, and will be under the supervision of Mr. H. V. Hotchkin.

The movement of articles quarantined under the Japanese beetle quarantine regulations from classified nurseries and greenhouses to the annual flower shows at New York, Philadelphia, and Baltimore, and the return of the stock to classified premises, required considerable supervision on the part of inspectors of the project. Certified stock was sealed with lead seals upon its arrival in the show building to assure proper identification upon its return. Frequent observations were made throughout the various exhibits for any possible emergence of adult beetles from stock brought in from unclassified greenhouses. A rather unique situation was encountered at the Baltimore Flower and Garden Show. In the absence of a suitable building in which to house the exhibits, large tents were erected in sections at the Baltimore City Stadium, making one tented area approximately 75 feet by 450 feet. Coal stoves were used to heat the enclosure. Since the stadium is located in an area known to be generally infested with the Japanese beetle, and as the ground surface inside the tent was uncovered, there was a possibility of infestation of plant material exhibited in direct contact with the ground. Accordingly exhibited certified stock intended for return to classified establishments was required to be placed on heavy roofing paper, tarpaulins, or wooden platforms. The three flower shows were held simultaneously during the week of March 16 to 21, although the Baltimore show did not open

until March 17.

Road inspection posts were established during the first week in April at the border of the Japanese beetle generally infested area on twenty roads leading from the area. Eight of these are located in Pennsylvania, two each in Maryland and Delaware, six on the District of Columbia--Maryland line, and Virginia and West Virginia each contain one post.

Field treatment of nursery stock as a requisite to certification began on April 10. The treating regulations require a minimum soil temperature of 40° F. before chemical treatments may be applied. Temperatures in excess of the prescribed minimum have obtained rather generally since the last week in March throughout the areas where treatments are applied, but the distant movement of stock from nursery establishments in quantities did not get under way until the middle of April.

Preliminary surveys were made between March 23 and April 10 of cities remote from the Japanese beetle regulated areas at which it is planned to conduct trapping operations to determine possible beetle infestation. Jacksonville, Fla.; Savannah, Ga.; Charleston, S. C.; Wilmington, N. C.; Wheeling, W. Va.; Cincinnati, Columbus, and Cleveland, Ohio; Detroit, Mich.; Chicago, Ill.; and Albany and Rochester, N. Y., were the cities visited. Favorable sites were selected in the vicinity of steamship piers, freight yards, railroad stations, and parks where traps might be placed. The corn borer office in Toledo has also arranged for cooperative supervision of the trap tenders working in Ohio, Illinois, and Michigan.

The Boston USDA Club

The regular meeting and informal luncheon of the Boston USDA Club was held at 12 South Market Street, Boston, Mass., on Tuesday, March 24, 1931. Forty-five members and guests attended the meeting, including Commander William F. Amsden, U. S. N., Coordinator, First Area; Captain E. K. Brockway, U. S. A., Assistant Coordinator; Mr. Philip Rothrock, Federal Grain Supervision, New York City; and Mr. R. A. Sheals, Plant Quarantine and Control Administration, Washington, D. C. Commander Amsden complimented the Club very highly as being one of the most active and interesting organizations he had ever visited, and expressed his hearty approval of such informal gatherings. Mr. C. Walter Collins, Bureau of Entomology, delivered an address on the research work conducted at the Gipsy Moth Laboratory at Melrose Highlands, Mass., and Dr. John N. Summers and Mr. S. S. Crossman, Plant Quarantine and Control Administration, briefly explained the moth quarantine and the control operations. The three films of the Department devoted to gipsy and brown-tail moth work were shown.

Employees of the Administration have always been active in the affairs of the Boston USDA Club. The office of President was held by Mr. L. H. Worthley in 1923, by Mr. R. I. Smith (deceased) in 1925, and by Mr. A. F. Burgess

in 1929. Mr. R. S. Clifton has held the office of Secretary-Treasurer since the formation of the Club in 1921. Through a combination of fortuitous circumstances, the Administration has also contributed very largely toward the success of the Club by being instrumental in providing a convenient meeting place without expense to the Club or the Department. This meeting place is a large room adjoining the European Corn Borer Quarantine Station. Home-made, collapsible tables are used, the chairs are loaned by the Wholesale Grocers' Association, and the "silver, china, and glassware" service for fifty has been accumulated from the five-and-ten cent stores. A bountiful luncheon (purchased at wholesale rates and at a minimum cost) is prepared and served in the meeting room, and motion pictures of some interesting activity of the Department are shown.

In its ten years of active existence, this Club has entertained many prominent guests, including Federal and State officials, and visitors from foreign countries interested in agriculture. It has performed a real service in bringing together employees of the Department who would not ordinarily come in close contact, and in providing a clearing house for the exchange of ideas and experiences connected with their diversified problems, which has been of benefit to the entire service. Officials of the Department visiting Boston are always welcomed as honored guests.

MEDITERRANEAN FRUIT FLY

Field inspection in Florida under Federal auspices was discontinued with the close of work on March 31. Instructions for this step to be taken had been transmitted the day before from Mr. Strong. A brief news story announcing the action, for publication on the morning of March 31 and thereafter, also was authorized in Mr. Strong's advices. In this release it was stated that no infestations had been found since July 25, 1930. Decision to bring the field work on account of the Mediterranean fruit fly to a conclusion at this time followed discussion of conditions, in which Mr. Hoidale participated while at Washington earlier in the month, and survey in the State made by Mr. Strong, Mr. Campbell, and Dr. Marlatt, on a trip which commenced March 23 and occupied the four ensuing days. Immediate reduction in personnel at district offices released a total of 170 men, 45 employees, including supervising inspectors and stenographers, having been temporarily retained to complete the records and prepare equipment and property for transfer. The force at the Orlando headquarters was also reduced by the dismissal of a number of persons whose services were no longer required, approximately 40 persons having been kept on here and at the garage. Additional reductions will follow at an early date, especially with respect to field offices. Machinery and equipment will be disposed of as rapidly as possible, much of it by transfer to other projects of the Administration, to other bureaus of the

[illegible]

[illegible]

[illegible]

[illegible]

Department of Agriculture, or to other departments of the Government. Already more than 50 carloads had been moved from Orlando, in anticipation of the early termination of activities. Records will be assembled in as compact a form as is practicable, for transfer to Washington.

Reactions on the part of growers and shippers to the announcement that the Federal field inspectors had been withdrawn were as varied as the previous attitude of the public toward the work had been lacking in unanimity. Among the better informed of the leading factors in the fruit and vegetable industry much concern was expressed as to the possible results of the lack of protective measures. Opponents of the eradication program, on the other hand, were pleased to know that Florida will no longer be under the observation of the Federal authorities. Anticipating the discontinuance of Federal inspection, the State Plant Board had included in its budget, for presentation to the legislature which convenes early in April, recommendation for a biennial appropriation large enough to provide scouting inspection at least once a year. Request was also made for renewal of the appropriation for citrus canker inspection, on approximately the same basis. A committee composed of 15 members of the legislature, seeking agreement as to finance and taxation measures, urged elimination of the citrus canker appropriation, on the ground that no infections have been reported within five years, when, as a matter of fact, one was discovered about three years ago.

During the last ten days of March the State was flooded with rumors pertaining to alleged changes in the system of inspection, and charging that infestations had been discovered by field men instructed to find them or lose their jobs. Origin of the whispering campaign apparently was in the fertile mind of an Orlando insecticide manufacturer, who claims to have been employed in the Department at one time. A contributing cause to the wide dissemination of the reports may have been a speech by a member-elect of the Florida legislature, who announced his intention of introducing a bill to abolish the State Plant Board. In the medley of statements which became current were included allegations that an unreasonable number of inspectors had been concentrated on the properties of grove owners who had objected to eradication procedure, that as high as 20 men had been placed in single groves or small groups of groves where infestations were found during 1929, that men had been imported from California to establish the continued presence in Florida of the fruit fly, and that in consequence of all these high pressure methods additional infestations had been located in four or five widely separated areas.

Numerous meetings were held in March at strategic points throughout the citrus belt for discussion of economies in producing grapefruit and oranges. In most cases the Clearing House Association worked up the attendance and speakers were supplied by the Agricultural Extension Service of the University of Florida. A new process for storing fruit intended to eliminate the necessity for refrigeration is to be exploited by W. J. Howey, developer of a large grove acreage in Lake County. Storage is to be in large steel tanks, from which oxygen has been ejected, and the process is the result of experiment by a former Department of Agriculture chemist, in conjunction with a refrigerating engineer. Early in the month the first car of citrus fruit

under mechanical refrigeration to be loaded in Florida was shipped from the DeLand house of the American Fruit Growers, Inc. Satisfactory results are reported and a good price was received.

Prices for citrus fruits continued to improve, ruling averages at the end of March having been considerably better than those prevailing at the close of February. The firmer tone characterizing the markets applied particularly to oranges, grapefruit not having shown pronounced upward tendencies until late in the month. Speculative buyers, inactive since the early part of the season, resumed operations in many sections, their offers of higher figures on contracts calling for delivery at future dates exerting a disturbing influence on the regular marketing agencies, cooperative and privately owned. Heavy bloom, in most sections equaling that of last year, forecasting another big crop for the 1931-32 season, has caused much discussion, there existing no previous record of two full production years in immediate succession.

Agitation for more stringent laws in respect to the shipment of immature citrus fruits gathered momentum in March, and agreement as to essential points in the proposed revision of the existing statutes was reached by a composite committee, which the Winter Haven Chamber of Commerce sponsored and included in the membership of which were representatives of the Clearing House Association, of the Citrus Exchange, and of the State Department of Agriculture. Delegates from the Committee of Fifty of the Clearing House declined to accept all of the proposed amendments, contending for even stricter regulations and for transfer of enforcement from the Department of Agriculture to the State Plant Board.

The acreage and other statistics in relation to the citrus plantings in Florida, compiled by the Administration in the prosecution of fruit fly eradication, apparently affording more dependable figures than have been assembled by other agencies, arrangements are in process of completion whereby the data will be released to the public through the Bureau of Agricultural Economics. Requests for the information have been filed by a number of statewide organizations, transportation companies, and similar interests, and it is known that it will be of value to the employees in the State of the Crop and Live Stock Division of Economics.

At a meeting in Winter Haven, called by the president of the newly formed Fruitmen's Association, composed of growers and shippers not affiliated with the Clearing House, which also was attended by representatives of the latter organization, preliminary steps were also taken looking to a voluntary state-wide bait spray campaign, on much the same plan as that followed last summer, sponsored by the Clearing House Association, distributing materials purchased from the Administration by the State Plant Board.

Grove inspection, in an effort to stop the use of arsenic sprays, has been inaugurated by State Commissioner of Agriculture Nathan Mayo. "With the virtual ending of the fruit fly work and the lifting of quarantines incident

thereto, all reason or justification for further use of arsenical spray was, of course, automatically removed," Mr. Mayo said. Applications have been continued, however, by growers seeking to reduce the acidity in the fruit, thus permitting earlier shipments complying with the maturity laws.

Nearly all the persisting refusals to permit inspection had been overcome before field work was discontinued. A number of the more difficult cases were handled in the last half of March. In only one instance was the inspection accomplished through court order secured by the State Plant Board. Regarding another refusal, legal proceedings were pending at the end of the month.

The biennial report to the Governor from the State Plant Board of Florida officially covers the two-year period ended June 30, 1930. As a greater part of the contents is devoted to a review and summary of the Mediterranean fruit fly eradication work, this is covered in an incidental way to the date on which the Federal quarantine was lifted, November 15, 1930.

Announcement was made by the officials of the Florida State Horticultural Society that invitation to address its Forty-fourth Annual Convention has been accepted by Mr. Strong. Dates chosen for the meeting are April 14 to 17, inclusive, and it will be held in Miami.

The monthly report of the identification division for March showed the examination of specimens as follows: Mediterranean Fruit Fly Project, negative file, 141,976; Mexican Fruit Worm Project, negative file, 2,397; *Anastrepha* file, 562; total, 144,935.

MEXICAN FRUIT WORM

The host-free period for the present season was inaugurated March 1. Under the regulations of Quarantine No. 64, all ripe and ripening fruit must be removed from the trees and placed in approved storage previous to March 1. Immediately upon the inauguration of the host-free period a check was made of each bearing tree in the quarantined area to see that no fruit had been overlooked by the grower. In order to complete this work as soon as possible and to destroy any occasional fruit missed by the grower, each inspector was assisted by three or four laborers. This work was completed in the last district on March 28. It was found that the growers had complied with the regulations exceptionally well this season, it being necessary to have the groves recleaned by the grower in only a very few cases. In only one case was serious opposition encountered in enforcing the host-free period. This was a case in Brownsville in which the owner of a dozen trees in his back yard refused to take the fruit off. This fruit, about three or four boxes in all,

was finally removed about the middle of the month through the efforts of the County Judge, County Attorney, and Chamber of Commerce.

In making the tree-to-tree inspection a close watch was kept for alternate host-fruit trees and where found every effort was made to have them destroyed. A total of 383 such trees were destroyed on 100 premises. While the great majority of these trees were seedlings which had come up during the past year, several were old trees that had been maintained by the owners since the quarantine became effective.

Citrus trees were in full bloom during the first half of the month. Experienced growers state that the trees had the heaviest crop of blooms in the history of the industry in this section. Even two and three year old trees blossomed profusely, and the older trees set a heavy crop of blooms on the inside as well as on the outside. Present indications point to the heaviest crop of fruit the coming season that has ever been produced in this section.

No infestations of fruit worm were found in locally grown fruit on either the American or Mexican side of the border. Larvae of the fruit fly continue to be found in mangoes reaching the border at Matamoros and Reynosa.

In view of the fact that only a very small amount of fruit was held in storage in the Valley, most of which would be consumed locally, the road traffic inspection work was discontinued on the 21st. Appointments of four agents and five collaborators who had assisted during the shipping season in issuing permit stamps for single-box shipments were terminated at the end of the month.

A public hearing was held by the County Commissioners' Court of Hidalgo County on March 30 for the purpose of hearing discussions on the advisability of requesting the Commissioner of Agriculture of Texas to proclaim a Control Zone, on account of the fruit worm, in Hidalgo County. This hearing was well attended by growers and packers, a number of whom expressed themselves as being very heartily in favor of seeing the work carried on. No opposition developing, the Court unanimously requested the Commissioner of Agriculture to issue the necessary proclamation. A proclamation had been issued in 1927 creating a Control Zone in this county. Later the general law under authority of which this proclamation was issued was repealed and a new law enacted by the legislature. It was thought best, to correct any legal technicalities, to rehold the hearings and reissue the proclamations under authority of the new law.

PINK BOLLWORM

The ginning of the 1930 cotton crop in the regulated areas was completed the latter part of March, a total of 336,325 bales having been ginned.

The seven gins in the Juarez Valley and Big Bend area, both in Mexico, immediately adjacent to regulated areas in the United States, are operated under regulations similar to ours and are supervised by inspectors of this project. During the past season 11,398 bales of cotton were ginned in these two areas. Our records show that 8,026 more bales of cotton were ginned during the 1929 crop season than during the 1930 season. However, the regulated area did not include the same territory during the two crop seasons. The Salt River Valley of Arizona was not placed in the regulated area until the latter part of October, 1929, and the greater part of the Western Extension of Texas, or the Big Spring section, was released in November, 1930.

It is interesting to note that the ginning season lasted longer this year than was anticipated due to a considerable increase in the amount of bollie cotton usually harvested. Many of the late bolls open only partially or not at all, due principally to cold weather. These bolls are picked and run through special machinery to remove the trash and burrs, after which the cotton is ginned in the regular manner. This is what is referred to as bollie cotton. The staple is shorter and the grade inferior to regular lint. The increase in the amount of bollie cotton picked resulted from the comparatively high prices paid for this class of cotton, bollie lint selling for only a few cents less than middling lint, and bollie seed for only $4 to $6 less than regular seed. In fact, farmers realized more from bollie cotton in some sections than from regular cotton, considering grade and staple.

All of the gins have been thoroughly cleaned except some of the last ones to close, at which the work of cleaning is now in the process of being completed. On the whole, a very fine spirit of cooperation was exhibited by the ginners.

The sterilization of seed has been satisfactory, the average efficiency being 97 per cent per bale for the season.

Most of the oil mills have completed the season's operations, 97 per cent of the seed received at the mills having already been crushed. A few of the mills are keeping small quantities of seed on hand to be used for planting purposes in case of emergencies. This year 95 per cent of the seed produced has been shipped to the various oil mills.

At the end of March 87 per cent of the cotton ginned had been fumigated. During the early part of the season most of the cotton produced in the Juarez Valley of Mexico was shipped to interior points in Mexico. The American price on lint and linters is now resulting in some of that cotton being imported to this country. Since the gins in the Juarez Valley are operated under regulations similar to ours, the cotton is allowed to be imported in bond and fumigated, after which it is handled in the same manner as cotton produced in regulated areas in this country. At the end of March 144 bales of Mexican lint and 200 bales of Mexican linters had been imported and fumigated.

The importance of road stations, even during the off season, is demonstrated by the fact that 22 confiscations were made during March. Of this

number two lots of material intercepted by G. E. Orr, at the Valentine, Tex., road station, contained specimens of the pink bollworm. On March 7, 74 dead larvae were taken from a pillow made of seed cotton, lint, wool, and mohair. The pillow originated at Presidio, Tex., and appeared to be three or four years old, which probably accounts for the fact that all of the specimens were dead. This is the largest number of specimens ever taken from an interception at any of our road stations. On March 11, two dead larvae were found in some cottonseed and seed cotton taken from a truck. This material was found between the cab and the truck bed.

Mention was made in the March News Letter regarding the approval of an appropriation, on February 6, to compensate farmers in Arizona for losses sustained because of the enforced nonproduction of cotton during the 1930 crop season. Since that time the Compensation Claim Board has been busily engaged in approving and submitting these claims. The majority of the claims have already been submitted to Washington for payment.

Satisfactory progress is being made at the San Antonio inspection laboratory, 1,589 samples of cotton bolls having been inspected during March. These samples represented fields in Alabama, Georgia, Mississippi, South Carolina, Tennessee, and Texas. A total of 3,353 samples of 100 bolls each have been inspected to date, with negative results.

The Phoenix, Ariz., office of the Pink Bollworm and Thurberia Weevil projects was recently moved from 424 Luhrs Building to 1104 North Central Street. The mail address is P. O. Box 1355.

PREVENTING SPREAD OF MOTHS

Except during the period immediately preceding Christmas, the inspection of evergreen products is confined almost exclusively to parts of evergreen trees and cut laurel used for decorative purposes. Laurel is used very extensively by florists particularly as a foundation for funeral pieces. Shipment of evergreen materials is not permitted from the generally infested area, and practically all of the laurel inspected originates beyond this area in Connecticut. In addition to laurel, florists use Southern boxwood and Oregon huckleberry quite extensively. These originate outside of the quarantined area and are shipped under permit. In northern New Hampshire a considerable amount of balsam is cut to be used in pillows. During March 51 bags of balsam twigs were inspected.

Empty cable reels, fuelwood, hardwood logs, lumber, pulpwood, and ties composed the bulk of the shipments of forest products inspected and certified. Early in the spring each year many long poles for marking oyster beds are cut and shipped from the district in southern Massachusetts. These are cut in the

swamps and are often infested with gipsy moth egg clusters. On numerous occasions the inspectors are called upon to certify shipments of bird houses. These are constructed of rustic materials which might bear egg clusters, and careful inspection is required.

The spring nursery stock shipping season begins in March as soon as the frost leaves the ground. In addition to this, many nurseries dig materials in the fall and store them. Such articles can be and often are shipped earlier. By the end of March practically all of the nurseries located within the quarantined area are in full swing and the district inspectors often require extra help.

Stone and quarry products are inspected and shipped from all parts of New England. They are of all types, from rough pieces of stone just as they are taken from the quarries, to finished monumental pieces. Paving blocks and curbing are shipped extensively. When freshly cut, there is small danger of their being infested, but often paving blocks remain for years before shipment, and these piles when placed near tree growth form excellent places for the gipsy moths to deposit their eggs. This necessitates very careful inspection as each block has to be handled.

The Commissioner of Agriculture of the State of Maine has recently issued quarantines effective April 1, 1931, covering the satin moth, and the gipsy and brown-tail moths. The Commissioner of Agriculture of the State of Vermont has also issued regulations pertaining to the satin moth, effective April 1, 1931. These State regulations have been drawn up with the purpose of having them conform with the Federal regulations.

During March two inspectors of this project were temporarily transferred to do transit inspection service, one of them in New York , the other in Chicago.

Arrangements have been made with the Transit Inspection Service for the inspectors in Boston to hold packages of small noncommercial shipments, such as wreaths and flowers, found en route in violation of the gipsy moth quarantine and certain other quarantines. The appropriate inspection organization is immediately notified of such action so that the articles can be inspected and allowed to proceed. This action should prevent delay of such shipments and is especially desirable in regard to materials sent at times of death.

Due to the negligible likelihood of satin moth larvae hibernating on the smooth bark of willow twigs, the regulations included in the satin moth quarantine will hereafter be interpreted that willow twigs used in tying bundles of nursery stock are not capable of propagation and therefore are exempt from the restrictions of these regulations.

On April 11, 1931, the Director of the Plant Industry Bureau of the State of New York released eleven nurseries on Long Island from the State quarantine which became effective a little over a year ago on account of the gipsy moth. This has been possible as no gipsy moth infestations have been

discovered on or near these properties during the past season's scouting. The scouting for gipsy moth infestations on Long Island is carried on by the New York State Conservation Department.

The brown-tail moth infestation, as indicated by the presence of the hibernating webs, is heavier than usual in southeastern Maine and eastern New Hampshire. In Maine there is infestation in most of the cities and towns south of Augusta and west to the New Hampshire State line, and in some cases the infestations are heavy, particularly on apple, pear, and cherry. State officials in Maine have notified the proper authorities in the cities and towns as to the proper control methods, and the cutting and burning of hibernating webs is being done in some places. Similar work is being done in New Hampshire by the State and local authorities, as well as by some individuals. In Massachusetts there is a local moth superintendent in each of the infested towns, and in most cases the hibernating webs of the brown-tail moth are removed and burned each year.

This project recently transferred to the Boston Post Office 25 new tires and 69 inner tubes. These were of no further use to this division due to the disposal of certain equipment.

The gipsy moth office at Melrose Highlands has three 1000-foot motion picture reels: One of them shows the life history of the gipsy and brown-tail moths and the damage they cause; another illustrates the control work in the Barrier Zone, with views of scouting, creosoting egg clusters, and spraying, and it also has some views of the various types of quarantine inspection work; the other shows views of parasite work, which is carried on by the Bureau of Entomology. These films were shown during March at New Marlboro and Sheffield, Mass., in the Barrier Zone, and at a noon meeting of the USDA Club at Boston. The two towns in the Barrier Zone are located in a section that seems to be particularly favorable for gipsy moth infestation, and close scouting and considerable cleaning, chopping, and spraying are necessary. Under such conditions more contacts are had with the property owners, for they are interviewed to obtain permission to chop or spray on their property. It is not the usual practice to obtain permission from property owners to carry on ordinary scouting work. Last year we had some difficulty in obtaining permits to spray from a few property owners in these towns, and it is hoped that the showing of the pictures has given the people a clearer understanding of the nature and necessity of the work, and that less objection to the signing of spray permits will result.

In the April News Letter an idea was given of the meaning of the term "scouting" as applied to gipsy moth work. The terms "cleaning," "chopping,", "permits," and "spraying" are used in the preceding paragraph, and in order that those who are not familiar with the gipsy and brown-tail moth work may have a better understanding of it the following explanation of cleaning and chopping is given. In a future letter, some details will be given pertaining to permits and spraying.

During the winter months the men doing scouting work look primarily

for gipsy moth egg clusters, but occasionally an infestation is discovered by the finding of gipsy moth pupal cases or molt skins. They also watch for the winter webs of the brown-tail moth. These are rather conspicuous, being from two inches to five inches long and usually on the outer twigs of apple, pear, wild cherry, oak, elms, etc. The gipsy moth egg clusters are buff colored. They vary in size from one-half inch to two inches in length and from one-half inch to three-fourths inch in width. They are deposited on the trunks and under sides of the branches of practically all kinds of trees and shrubs, also on broken branches lying on the ground, fallen trees, or stones in the woodlands, and in stone walls, as well as on buildings and on most any debris in the woods or in residential sections. Cleaning work is done in sections where gipsy moth infestations are located to get rid of conditions that are favorable for gipsy moth increase and that are difficult to thoroughly scout and spray, such as brambles of growth often intertwined with wild blackberry bushes, bull briars, grapevines, woodbine, poison ivy, etc. Sometimes rivers are bordered by willows and river-birch trees. Often these are large and lean over the water, and are very difficult and often hazardous to examine. Such trees and brambles are cut out and burned during the winter as time permits. Much of this type of work is done on days when the woods are too wet or the light too poor to carry on scouting work, and so it serves the dual purpose of keeping the force busy and improving conditions for combating the gipsy moth. Chopping work applies in some cases to thinning operations in woodlands so that spraying can be done more economically and thoroughly, but often it applies to the chopping of large white oaks or other large trees the foliage of which is especially favorable food for the gipsy moth caterpillars. These trees are difficult to climb and examine for gipsy moth egg clusters and are costly to spray. Often there are only a few such trees in a woodland or scattered over large pasture areas. By removing such trees considerable expense is saved in future scouting work as well as in spraying operations, for on some occasions it is necessary to lay long lines of hose to spray one or two large pasture trees.

Arrangements were made during March for the transfer of ten sprayer trucks from the Mediterranean Fruit Fly activity in Florida to this project. These will be shipped by freight to Pittsfield, Mass. The trucks will require mechanical changes in order to adapt them for gipsy moth spraying work, as unusually high pressure is required when long lines of hose are laid out, as is often necessary. An engineer of the Bureau of Public Roads is preparing the specifications for these changes.

Appointments were made during March of 65 Agents, who are paid on the basis of time actually employed, the rates ranging from $4.24 to $4.56 per day. Thirty-seven agents were appointedat an annual salary of $1500.

During March there were 60 violations reported of Quarantine No. 45. Sixteen of these violations were also violations of Quarantine No. 53, and one of them also violated Quarantine No. 63. All of these violations were intercepted by transit inspectors. As far as investigations of these violations have been made, they were of a minor nature, due to ignorance of the quarantine on the part of the shipper or misunderstanding on the part of the

transportation agents. No prosecutions were instituted. Information concerning quarantine requirements was given by investigating inspectors of this project in all cases where the parties could be located.

Because of adverse scouting conditions due to an unusually heavy fall of snow, all men excepting two small crews working in the Massachusetts portion of the Barrier Zone were transferred during the second week in March to southwestern Connecticut where working conditions were more satisfactory. By the end of the month snow conditions in western Massachusetts were much improved and it is expected that the men will be transferred back to the Massachusetts section of the area to complete the scouting program planned there for this season. It will also be necessary to resume cleaning operations in towns where infestations are known to exist as there is a considerable amount of this type of work to be done before the spraying season begins.

Scouting work was carried on during March in the Barrier Zone in 12 towns in Connecticut, 7 in Massachusetts, and 2 in Vermont. In 7 of these towns the work was close scouting around the sites of gipsy moth infestations discovered and treated during the previous year. The scouting in the other towns was the 40-foot strip method described in the previous News Letter. Work was completed in 2 towns in Connecticut, with negative results. The scouting has resulted in finding infestations in several towns, but so far the towns of New Marlboro, Sandisfield, and Sheffield, Mass., are more seriously infested than any others in the Zone.

Scouting work was continued by the New York Conservation Department in 6 towns in a section of the Zone in New York State and on Long Island. As a result of this work no infestations have been reported other than those mentioned in the previous News Letter. On Long Island the work was done in the townships of North Hempstead and Oyster Bay, in Nassau County, and in the township of Huntington, in Suffolk County. North Hempstead was completed about the middle of March and the crews that had been working in this township were transferred to the township of Huntington.

The cooperative work between Federal and State offices in New Jersey has not discovered any infestation in this State. The scouting work planned for the township of Bridgewater was finished about the middle of the month and the crews were transferred to Piscataway Township to work in the vicinity of the gipsy moth infestation which was located there in May, 1929. It is expected that the work in Piscataway and Hillsboro Townships will be finished about the middle of April. If no further infestations are found, this will complete the scouting work planned for New Jersey for this season except for checking up work in the vicinity of infestations that were discovered in the townships of North Plainfield and Warren during the fiscal year 1928.

The inspection of nursery and forest products in New Jersey and on Long Island increased materially during the month. There is no Federal quarantine on account of the gipsy moth in New Jersey or on Long Island, but the infested areas are quarantined by State regulations which are enforced by the Federal Government. Several nurseries were released from the State quarantine on Long Island, as mentioned earlier in these news items.